#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013272 Address: 333 Burma Road **Date Inspected:** 20-Apr-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Du Zhi Qun No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

Tower **Bridge No:** 34-0006 **Component:** 

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

#### **BAY 11**

This QA Inspector performed randomly Visual Inspection Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as West Tower lift 5 C/D corner joint. The weld designations reviewed are as follows.

WSD1-TL5-4B/F-2A/B, WSD1-TL5-4B/F-38A/B. NDT Notification No-005557

This QA Inspector performed randomly Visual Inspection Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as Tower skirt and Tower skirt pad eye. The weld designations reviewed are as follows.

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ESD1-A63B/D-22, 26 ESD1-A63A/D-32, 33 NDT Notification No-005563

This QA Inspector observed the following work in progress:

**BAY 11:** 

**SMAW Process:** 

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, 046704. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-135M-2-10B, ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2212-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 046709. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-127M-1-9B, ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2212-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 041271. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-127M-1-73A, 6B, ZPMC QC Identified as Mao Bin Bin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040619. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ND1-STSA4-6-131M-1-74B, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040724. Perform Shielded Metal Arc Welding (SMAW) on Tower Strut. Joint identified as ED1-STSA4-6-139M-1-10B, ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2212-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 040619. Perform Shielded Metal Arc Welding (SMAW) on Tower Skirt Pad eye. Joint identified as ESD1-A65A/B-2~20, ZPMC QC Identified as Xu Jin Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2112-Pad eye. For more information see below attach photo.

#### **SAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 044550. Perform Submerged Arc Welding (SAW) on Angle connection plate. Joint identified as ED1-SA4-69-119M-5, 6, 7, 8-1B, ZPMC CWI Identified as Yu Dong Ping, The welding parameters as measured using QC's calibrated instrument appeared to be

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in general compliance with WPS-B-T-3221-Tc-U5-S-1.

#### **SAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 047304, 042195. Perform Submerged Arc Welding (SAW) on Grillage plate. Joint identified as GTSA5-B/G-10A, 9A, ZPMC QC Identified as Xu Jian Long, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-U3c-S-2.

#### FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040759. Perform Flux Core Arc Welding (FCAW) on East tower lift 4 Fit Lug. Joint identified as ESTL4-2H/L-37, ZPMC CWI Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 040759. Perform Flux Core Arc Welding (FCAW) on East tower lift 4 Fit Lug. Joint identified as ESTL4-2F/L-42, ZPMC CWI Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F. For more information see below attach photo.

This QA Inspector observed ZPMC qualified welding personnel identified as 040759. Perform Flux Core Arc Welding (FCAW) on East tower lift 4 Fit Lug. Joint identified as ESTL4-2G/L-42, ZPMC CWI Identified as Lilin, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

## BAY 10:

#### **SAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 0503060. Perform Submerged Arc Welding (SAW) on Facade plate. Joint identified as SD1-SFSA4-5A/B-1, ZPMC QC Identified as Yu Zhi Lai, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-L2c-S.

## **SAW Process:**

This QA Inspector observed ZPMC qualified welding personnel identified as 0503060. Perform Submerged Arc Welding (SAW) on Facade plate. Joint identified as SD1-SFSA4-1A/B-1, ZPMC QC Identified as Yu Zhi Lai, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-L2c-S.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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# **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Shailesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer